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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,245	06/09/2000	Jung-Gi Kim	P2008	3212

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EXAMINER	
CHOUDHARY, ANITA	
ART UNIT	**PAPER NUMBER**
2153	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/591,245	KIM, JUNG-GI	
	Examiner	Art Unit	
	Anita Choudhary	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,7,8,11-14,16,25 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,7,8,11-14,16,25 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on October 25, 2004 under 37 CFR 1.312 has been entered. Claims 8 and 14 have been amended and are presented for further examination. New claim 26 is added. Claims 3, 5, 6, 9, 10, 15 and 17-24 have been cancelled.

Claims 1, 2, 4, 7, 8, 11-14, 16, 25 and 26 are presented.

Response to Arguments

Applicant's arguments, see Amendment After Final, filed October 25, 2004 with respect to the rejections of claims 1, 2, 4, 7, 8, 11-14, 16, 25 and 26 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the Final Rejection dated July 23, 2004 has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the following references:

Harada (US 6,195,511) and Irons (US 6,272,587).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitations in lines 10-12 of claim 1 are not clearly understood in view of limitation presented in lines 13-14 of claim 1. It is not clear from the claim language

whether the production file being downloaded from the host computer is an updated production processing program. If the production processing program itself were being upgraded then the production file would be a production processing program. The claim is confusing because there is no relationship presented between the production file and the production-processing program. Therefore it is unclear whether the production file is present in the DRAM in order for upgrading of production processing program to be performed in the DRAM. Examiner has interpreted the production file to be production-processing file according to page 13 line 17 to page 14 line 8 of the specification.

Appropriate explanation and/or amendments to the claim 1 are requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 8, 13, and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Harada (US 6,195,511).

In referring to claim 8, Harada shows a memory alternation system for a camera and its control method by downloading and rewriting contents of a flash memory bank with newly updated contents. Harada utilizes at least two memory banks for storing and executing rewrite and control programs. Harada teaches the following features:

- a host computer for converting an execution file prepared by an operator into said updated firmware (fig. 1a-f, 101-106; fig. 2b, col. 5 lines 62-col. 6 lines 6);

- at least one personal computer (camera, 100) coupled to said host computer for receiving said new firmware downloaded from said host computer (fig. 2a and 2b, item 29, col. 5 lines 24-26);
- a firmware board having (camera MPU, 1);
- a communication interface means (fig. 2a, item 26)connected for communicating with said personal computer and for transferring data between said personal computer and said firmware board (col. 5 lines 23-24, col. 3 lines 58-62);
- a first memory (fig. 2a, item 3) means coupled to said communication means for storing a boot program, operating codes, and said operating system firmware (fig. 2a, "bank a", col. 4 lines 57-63); and
- a second memory means coupled to said first memory means for storing a copy of information stored in said first memory means to be replaced with said updated firmware (fig. 2a, "bank b", col. 7 lines 55-63);
- wherein said personal computer is further operable for transmitting to the firmware board said updated firmware downloaded from said host computer and wherein, based on an analysis (rewrite processing) of the transmitted firmware by a production-processing program in said first memory means, the production-processing program operates in either the first or second memory means in storing the transmitted firmware into a corresponding region of said first memory means (col. 7 lines 36-63).

In referring to claim 13, Harada shows host computer is further operable for attaching a storage address (rewrite target) information of said first memory means to said updated firmware (col. 7 lines 49-54).

In referring to claim 25, Harada shows the replacing of copy of information with the updated firmware (fig. 5, S304, col. 8 lines 1-3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 7, 14, 16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Harada in view of Irons (US 6,272,587).

In referring to claim 1, Harada shows:

- a host computer for converting an execution file prepared by an operator into said updated firmware (fig. 1a-f, 101-106; fig. 2b, col. 5 lines 62-col. 6 lines 6);
- a flash memory (3) disposed in the firmware board (6) for storing a production-processing program("bank a" flash rewrite control program, col. 4 lines 57-59);
- a personal computer (PC) (camera 100) for receiving the production file downloaded from the host computer and for storing the downloaded file in a corresponding region of the flash memory (col. 6 lines 47-60); and
- wherein the PC stores the production file in the flash memory using the production-

processing program in the flash memory (col. 7 lines 55-63, Note: loader is executed from "bank b" of flash memory in order to store new loader into "bank a").

Although Harada shows substantial features of the claimed invention, Harada does not show *a DRAM for storing a copy of the production-processing program from the flash memory when upgrading the production-processing program so that the upgrading can be performed in the DRAM.* Nonetheless this feature is well known and would have been an obvious modification to the system shown by Irons.

In an analogous art, Irons shows a method for upgrading a flash memory utilizing a RAM cache. Irons shows a RAM cache for storing a copied portion of the flash memory when upgrading the flash memory so that upgrading can be performed in RAM (col. 5 lines 57-59, col. 6 lines 29-44).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Harada to employ the features shown by Irons in order to process updates to flash memory in the RAM cache which is much faster (see Irons, col. 2 lines 25-30 and 57-63).

Although Harada and Irons do not specifically shows a Dynamic Random Access Memory, this feature would have been obvious to a person having ordinary skill in the art who would recognize the advantages and desirability of modifying Harada and Irons by including the limitation of (1) Dynamic RAM or (2) Static RAM in order to:

(1) allow for the system to hold more data than when using RAM and to reduce system cost; and

(2) improve the systems efficiency by increasing speed and reducing power consumption.

In referring to claim 2, Harada shows first memory comprising a flash memory, and a communication means (col. 4 lines 57-63, col. 5 lines 23-24). Although Harada and Irons do not specifically show a RS232C line, this features would have been obvious to a person having ordinary skill in the art who would recognize the advantages and desirability of modifying Harada and Irons by including the limitation of RS232C line in order to conduct standard serial transmission between computer and peripheral devices using a 25-pin DB-25 or 9-pin DB-9 connector, extendable to several hundred feet with high-quality cable.

In referring to claim 4, Harada shows camera transmits the production file to the flash memory when a transmission command is inputted thereto (rewrite instruction "ON", col. 7 lines 36-40).

In referring to claim 7, Irons shows upgraded production processing program in the DRAM is transferred back to the flash memory (col. 6 lines 29-31).

In referring to claim 14, Harada shows:

- providing a flash memory (3) in the firmware board (1) for storing a production-processing program (loader program, col. 4 lines 57-63);
- creating, by a host computer, a file for a production by converting an execution file prepared in advance into the file for production (col. 5 lines 62- col. 6 line 6, fig. 2b, 101-106);
- receiving the production file, by a personal computer (PC), downloaded from the host computer (col. 6 lines 47-60); and, storing the production file in the corresponding region of the flash memory,

- wherein the production file includes a header portion containing a storage address of the flash memory (rewrite target, col. 7 lines 49-51), a compression state (col. 8 lines 32-45), and a booting state (On/Off, col. 6 lines 32-38) for the production file.

Although Harada shows substantial features of the claimed invention, Harada does not show *the method comprising the step of duplication the production-processing program in the DRAM/SRAM while upgrading the production processing program in the DRAM/SRAM.* Nonetheless this feature is well known and would have been an obvious modification to the system shown by Irons.

In an analogous art, Irons shows a method for upgrading a flash memory utilizing a RAM cache. Irons shows a RAM cache for storing a copied portion of the flash memory when upgrading the flash memory so that upgrading can be performed in RAM (col. 5 lines 57-59, col. 6 lines 29-44).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Harada to employ the features shown by Irons in order to process updates to flash memory in the RAM cache which is much faster (see Irons, col. 2 lines 25-30 and 57-63).

Although Harada and Irons do not specifically shows a Dynamic Random Access Memory, this feature would have been obvious to a person having ordinary skill in the art who would recognize the advantages and desirability of modifying Harada and Irons by including the limitation of (1) Dynamic RAM or (2) Static RAM in order to:

(1) allow for the system to hold more data than when using RAM and to reduce system cost; and

(2) improve the systems efficiency by increasing speed and reducing power consumption.

In referring to claim 16, Harada shows camera transmits the production file to the flash memory when a transmission command is inputted thereto (rewrite instruction "ON", col. 7 lines 36-40).

In referring to claim 26, Harada shows prior to creation of the file for production, host computer attaches a storage address of the flash memory (rewrite target, col. 7 lines 49-51), a compression state (col. 8 lines 32-45), and a booting state (On/Off, col. 6 lines 32-38) for the production file.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada.

In referring to claim 11, Harada shows said second memory means comprises a RAM (fig. 8). Although Harada does not specifically shows a Dynamic Random Access Memory, this feature would have been obvious to a person having ordinary skill in the art who would recognize the advantages and desirability of modifying Harada by including the limitation of (1) Dynamic RAM or (2) Static RAM in order to:

(1) allow for the system to hold more data than when using RAM and to reduce system cost; and

(2) improve the systems efficiency by increasing speed and reducing power consumption.

In referring to claim 12, Harada shows first memory comprising a flash memory, and a communication means (col. 4 lines 57-63, col. 5 lines 23-24). Although Harada does not specifically show a RS232C line, this features would have been obvious to a person having ordinary skill in the art who would recognize the advantages and desirability of modifying Harada by including the limitation of RS232C line in order to conduct standard serial transmission between computer and peripheral devices using a 25-pin DB-25 or 9-pin DB-9 connector, extendable to several hundred feet with high-quality cable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anita Choudhary
December 2, 2004

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